

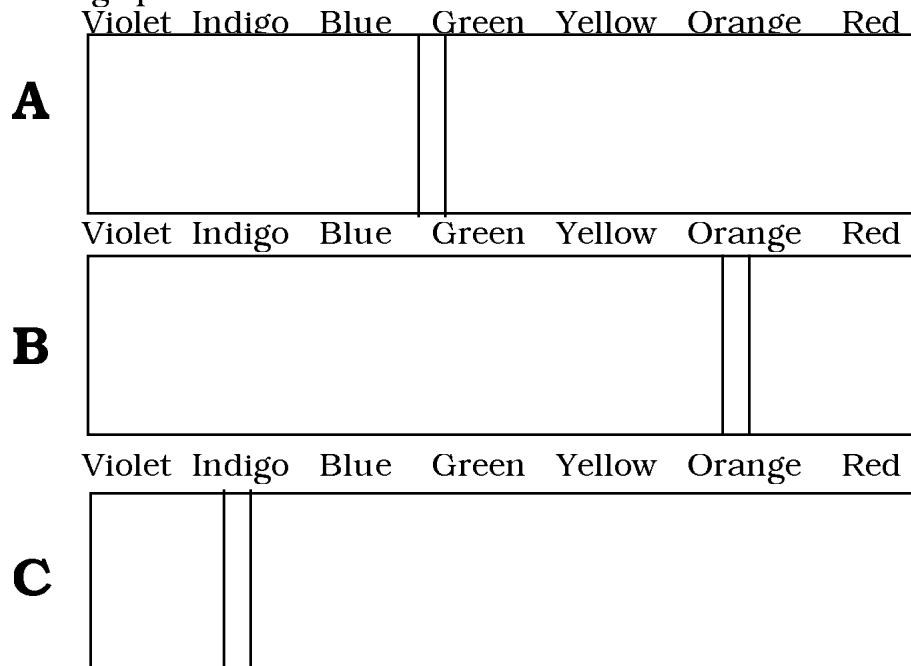
# The Spectroscope Lab

Name \_\_\_\_\_

1. Aim the spectroscope at the ceiling lights, which are **fluorescent**.
2. With one eye, look into the box through the diffraction grating and observe the color of the spectrum (rainbow.)
3. Record your observations of the fluorescent spectrum.

4. Aim the spectroscope at the overhead light, which is **incandescent**.
5. Record your observations of the incandescent spectrum.

6. Observe the following spectra:



7. How are B and C different from A?
8. Which spectrum represents the RED SHIFT?  
the BLUE SHIFT?
9. Which spectrum represents the light from a star moving toward the earth?  
Away from the earth?

10. Observe the following spectra: **Note: Copyrighted sketches used below:**

Helium: Star X:

Hydrogen: Star Y:

Carbon: Star Z:

Nitrogen: Star Z:

11. What elements is Star X composed of?

12. What elements is Star Y composed of?

13. Which elements is Star Z composed of?